

NEMA RV 3-2014

Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal and Nonmetallic Conduits



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*Application and Installation Guidelines for Flexible and
Liquidtight Flexible Metal and Nonmetallic Conduits*

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Foreword

These application and installation guidelines offer practical information on correct usage and industry-recommended practices for the installation of Flexible Metal Conduit (Type FMC) and Liquidtight Flexible Metal Conduit (Type LFMC) in accordance with the *National Electrical Code*[®] (NEC).

These guidelines have been developed by the NEMA Building Wire and Cable Group. The Group's Flexible Metal Conduit Technical Committee has committed to periodically reviewing them for any revisions necessary to address changing conditions, product listing and installation requirements, and technical progress. Comments for proposed revisions are welcome and should be submitted to:

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At the time of approval, the NEMA Building Wire and Cable Group's Flexible Metal Conduit Technical Committee had the following members:

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Anamet Electrical, Inc.	Mattoon, IL
Electri-Flex Company	Roselle, IL
Encore Wire Corporation	McKinney, TX
International Metal Hose Company	Bellevue, OH
Southwire Company	Carrollton, GA

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Section 1 APPLICATION GUIDELINES FOR FLEXIBLE METAL CONDUIT

1.1 CONSTRUCTION

1.1.1 General

Flexible Metal Conduit (Type FMC) is constructed in accordance with the *National Electrical Code*[®] (*NEC*) and complies with the safety requirements of Underwriters Laboratories (UL) UL 1, *Standard for Safety for Flexible Metal Conduit*.

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1 Batterymarch Park
Quincy, MA 02269

1.1.2 Conduit

Flexible Metal Conduit (Type FMC) is constructed with an interlocked corrosion-resistant steel or aluminum strip and is manufactured in accordance with UL 1, which specifies strip thickness, splices, convolutions, interior surfaces, conduit diameters (internal and external), and the quality requirements of aluminum strip— and zinc-coated steel.

1.2 GROUNDING AND BONDING

FMC is approved for bonding when installed in accordance with *NEC* articles 348 and 250 but is limited to 6-ft lengths when used for this purpose.

1.3 EQUIPMENT GROUNDING CONDUCTOR

One or more equipment grounding conductors are allowed but are not required. *NEC* Section 348.60 states, however, that an equipment grounding conductor is required when FMC is used to connect equipment where flexibility is necessary to minimize transmission of vibration from equipment or to provide flexibility for equipment that requires movement after installation.

1.4 CODES AND STANDARDS

1.4.1 *National Electrical Code*[®] (*NEC*)

Flexible Metal Conduit (FMC) is designed, manufactured, and tested for use in accordance with *NEC* Article 348 and UL 1.

1.4.1.1 Uses Permitted

NEC Section 348.10 specifies the permitted uses of FMC in exposed and concealed locations. These permitted uses are not all-inclusive. They provide guidance only on where FMC may be used.

In addition to permitted uses covered in Section 348.10, FMC is permitted for installation as follows:

- a) Outside branch circuits and feeders;
- b) Services;
- c) Ducts or plenums used for environmental air;
- d) In other spaces used for environmental air;
- e) Under raised floors of computer rooms;
- f) Lighting whips;
- g) Motor leads.